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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,699	02/18/2004	Huang Meng-Cheng	OP-092000358	8959
7590 06/28/2005			EXAMINER	
Yi-Wen Tseng 4331 Stevens Battle Lane Fairfax, VA 22033			MCKINNON, TERRELL L	
			ART UNIT	PAPER NUMBER
			3743	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/779,699

Applicant(s)

MENG-CHENG ET AL.

Examiner

Terrell L. Mckinnon

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. 2003/0230398) in view of Michel et al. (EP 065679).

Lee discloses a heat dissipating device comprising:

- a bottom plate, having a bottom receiving chamber (22) recessed from a top surface;  
the top plate (25) and the bottom plate are covered by each other to form a planar shell, wherein the top and bottom receiving chambers are filled with work fluid;
- at least one hollow thermal expansion conductor(30), wherein one end of the thermal expansion conductor is inserted into the planar shell, and the other end thereof extends outside of the planar shell, such that the thermal expansion conductor is in fluid communication with the top and bottom receiving chambers;
- the thermal expansion conductor includes a tubular heat pipe heat plate and/or a columnar heat pipe;

- a plurality of fins (27) through which the tubular heat pipe penetrate through;
- a proximal end of the thermal expansion conductor is embedded in the planar shell between the top and bottom plates, and the other end thereof extends outside of the planar shell;
- the thermal expansion conductor is at least partially embedded in the bottom plate; and
- the thermal expansion conductor is at least partially embedded in the top plate.

Lee fails to disclose a top plate, having a top receiving chamber recessed from a bottom surface thereof; a hollow filling tube embedded in a sidewall of the planar shell, the hollow filling tube being in fluid communication with the top and bottom receiving chambers; and the filling tube has one sealed end distal to the planar shell.

However, Michel teaches a top plate, having a top receiving chamber recessed from a bottom surface thereof; a hollow filling tube embedded in a sidewall of the planar shell, the hollow filling tube being in fluid communication with the top and bottom receiving chambers; and the filling tube has one sealed end distal to the planar shell.

Given the teachings of Michel, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the heat dissipating device of Lee with a top plate, having a top receiving chamber recessed from a bottom surface thereof; a hollow filling tube embedded in a sidewall of the planar shell, the hollow filling tube being in fluid communication with the top and bottom receiving chambers; and the filling tube

Art Unit: 3743

having one sealed end distal to the planar shell.

Doing so would provide a thermally efficient heat dissipating structure for cooling heat-generated devices.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references cited on the USPTO 892 discloses related limitations of the applicant's claimed and disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L. Mckinnon whose telephone number is 571-272-4797. The examiner can normally be reached on Monday -Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/779,699  
Art Unit: 3743

Page 5

A handwritten signature in black ink, appearing to read "Terrell L. Mckinnon". The signature is stylized with a large, sweeping initial "T" and "M".

Terrell L Mckinnon  
Primary Examiner  
Art Unit 3743  
June 27, 2005